US008795412B2

(12) **United States Patent**
McGrail et al.

(10) **Patent No.: US 8,795,412 B2**
(45) **Date of Patent: Aug. 5, 2014**

(54) **METHODS FOR ASSOCIATING OR DISSOCIATING GUEST MATERIALS WITH A METAL ORGANIC FRAMEWORK, SYSTEMS FOR ASSOCIATING OR DISSOCIATING GUEST MATERIALS WITHIN A SERIES OF METAL ORGANIC FRAMEWORKS, THERMAL ENERGY TRANSFER ASSEMBLIES, AND METHODS FOR TRANSFERRING THERMAL ENERGY**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 186 days.

(21) Appl. No.: **13/410,804**

(22) Filed: **Mar. 2, 2012**

(65) **Prior Publication Data**

US 2012/0223271 A1 Sep. 6, 2012

Related U.S. Application Data

(60) Provisional application No. 61/448,965, filed on Mar. 3, 2011.

(51) **Int. Cl.**
B01D 53/04 (2006.01)
F25B 17/08 (2006.01)

(52) **U.S. Cl.**
USPC **95/90**; 96/115; 96/126

(58) **Field of Classification Search**
USPC 95/90, 114, 115; 96/115, 121, 126, 146; 62/271, 480
See application file for complete search history.

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(57) **ABSTRACT**

Methods for releasing associated guest materials from a metal organic framework are provided. Methods for associating guest materials with a metal organic framework are also provided. Methods are provided for selectively associating or dissociating guest materials with a metal organic framework. Systems for associating or dissociating guest materials within a series of metal organic frameworks are provided. Thermal energy transfer assemblies are provided. Methods for transferring thermal energy are also provided.

9 Claims, 5 Drawing Sheets